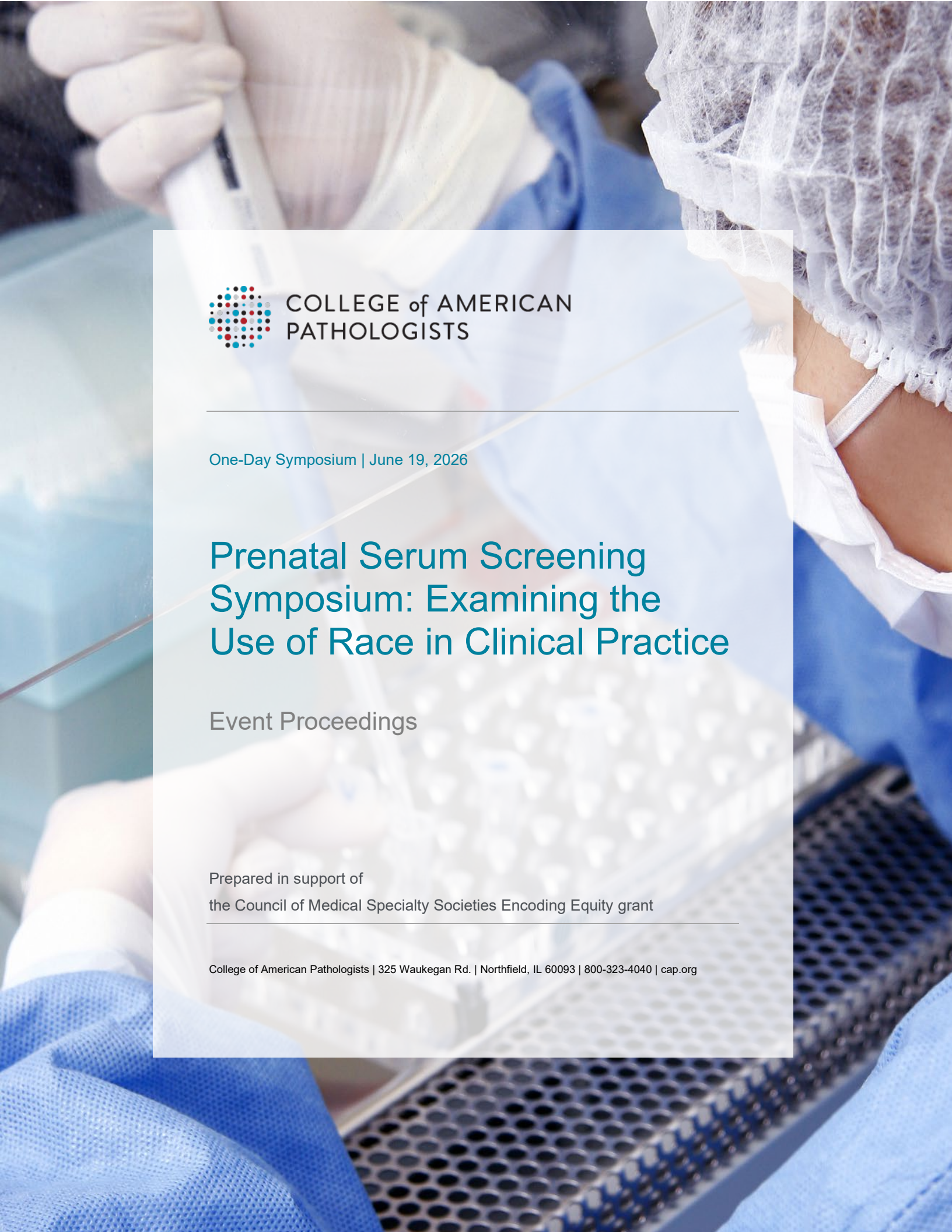


COLLEGE of AMERICAN PATHOLOGISTS

One-Day Symposium | June 19, 2026

Prenatal Serum Screening Symposium: Examining the Use of Race in Clinical Practice

Event Proceedings

Prepared in support of
the Council of Medical Specialty Societies Encoding Equity grant

College of American Pathologists | 325 Waukegan Rd. | Northfield, IL 60093 | 800-323-4040 | cap.org

Executive Summary

Purpose: To summarize key insights from the symposium and identify practical implications for the College of American Pathologists' (CAP's) evidence-based guideline and implementation work.

On June 19, 2026, the **Prenatal Serum Screening Symposium: Examining the Use of Race in Clinical Practice** convened clinical, laboratory, research, and implementation experts to examine the scientific, clinical, ethical, and operational considerations surrounding the use of race in prenatal serum screening algorithms. The virtual symposium was designed to support the CAP's broader work under the Council of Medical Specialty Societies Encoding Equity grant.

The symposium included research presentations on race in prenatal screening, a CAP evidence-based guideline development update, clinical perspectives, implementation experiences from other areas of medicine, and a forward-looking discussion on how laboratories can responsibly move toward more equitable practice. The event brought together **104 attendees**.

Key Takeaways

- **The case for reassessing race in prenatal serum screening is both scientific and ethical.** The symposium reinforced that race-based adjustments should be examined carefully because laboratory algorithms and reference practices influence clinical decisions, patient trust, and equity in care.
- **Evidence gaps remain central to decision-making.** Poll responses identified needs for research evaluating patient-centered outcomes, better understanding of what race may be serving as a proxy for, race-neutral alternatives, fetal outcomes, contemporary and diverse datasets, and direct comparisons between race-adjusted and race-unadjusted approaches.
- **Implementation concerns are real and varied.** Participants emphasized the need for practical support, not just recommendations.

Implications for the CAP

CAP leadership opportunity: The symposium demonstrates a clear opportunity for the CAP to provide leadership where science, laboratory practice, health equity, and implementation intersect. Pathologists and laboratory professionals are central to this work because validating algorithms and biomarkers, interpretations, and diagnoses shape patient care.

Immediate Next Steps

The CAP will finalize the evidence-based guideline, develop practical resources such as education and implementation guidance, and work with its research partner to continue assessing the use of race in alpha-fetoprotein (AFP) testing.

Overall, the symposium advanced the CAP's Encoding Equity work by creating a structured, multidisciplinary forum to clarify the evidence, bring forward implementation realities, and identify the support that laboratories will need to move toward scientifically rigorous and equitable prenatal serum screening practices.

Summary of Sessions

Session I: Research into Race in Prenatal Screening

Presenters reviewed emerging research evaluating the impact of race-adjusted versus race-neutral approaches in prenatal serum screening.

> *"Race is imprecise. It's riddled with compromises that, if we're being honest with ourselves, don't pass scientific muster."*
> **— R. Nicholas Burns, MD**
>
> "*There remains a real fear that [race] will be used against racialized people in a eugenic way, especially when it comes to prenatal screening*"
> **— Danna Hull, MSc, CCGC, CGC**

- Data from the US and from the Canadian screening program Better Outcomes Registry & Network Ontario demonstrated variability in screening performance across populations and highlighted challenges in interpreting race as a biological variable.
- Discussion focused on whether race is functioning as a proxy for other biological, social, or environmental factors.
- Speakers emphasized the need for contemporary, diverse datasets to evaluate the clinical consequences of removing race adjustments.
- Evidence gaps remain regarding patient-centered outcomes and the downstream effects of changes to screening algorithms.

Session II: CAP Evidence-based Guideline

In addition to the guideline development process, the status of the systematic review and draft recommendations for the Use of Race in Prenatal Serum Screening guideline was presented.

> *"The evidence on patient-centered outcomes and downstream clinical impact was really quite limited."*
> **— Ann Moyer, MD, PhD, FCAP**

- The presentation reviewed the available evidence supporting and challenging the use of race-specific adjustments in serum prenatal screening.
- The draft recommendations were shared and areas of uncertainty highlighted, particularly where evidence is limited or inconsistent.

- Attendees discussed differences in how race may affect various analytes and screening applications.
- The session reinforced the CAP's commitment to a transparent, evidence-based process for developing recommendations.

Session III: Clinical Perspectives

In this moderated session, maternal-fetal medicine physicians discussed the real-world implications of retaining race in or removing race from screening algorithms.

> *"The education piece will be the hardest… [race] is so baked into what we do."*
> **— Shani Delaney, MD**

- Panelists emphasized balancing scientific validity, equity, patient trust, and clinical outcomes when making practice changes.
- Discussion explored concerns about unintended consequences if race adjustments are removed without adequate evidence or alternatives.
- Panelists highlighted the importance of considering underserved populations and historical inequities in healthcare.
- Attendee questions addressed maternal mortality, over-testing, patient counseling, and future research priorities.
- A recurring theme was the need to distinguish race from underlying biological and social drivers of risk.

Session IV: Implementation Experiences

Speakers shared lessons learned from other areas of medicine that have successfully modified or removed race-based adjustments.

> *"We don't have to be slaves to… prior interpretations, to the way things were done, to what was in a textbook before."*
> **— Aaron Baugh, MD**

- Major implementation challenges included legacy practice patterns, stakeholder resistance, system limitations, and provider education.
- Panelists stressed the importance of clear evidence, communication, and change-management strategies when introducing practice changes.
- Examples from other specialties demonstrated that operational barriers can be overcome when supported by strong evidence and professional guidance.
- Participants noted that physician and laboratory acceptance often depends on confidence in replacement approaches.
- Discussion underscored that implementation planning should begin well before guideline publication.

Session V: Moving the Laboratory Forward

The session focused on the laboratory's leadership role in advancing equitable and evidence-based testing practices and shared information for how the University of

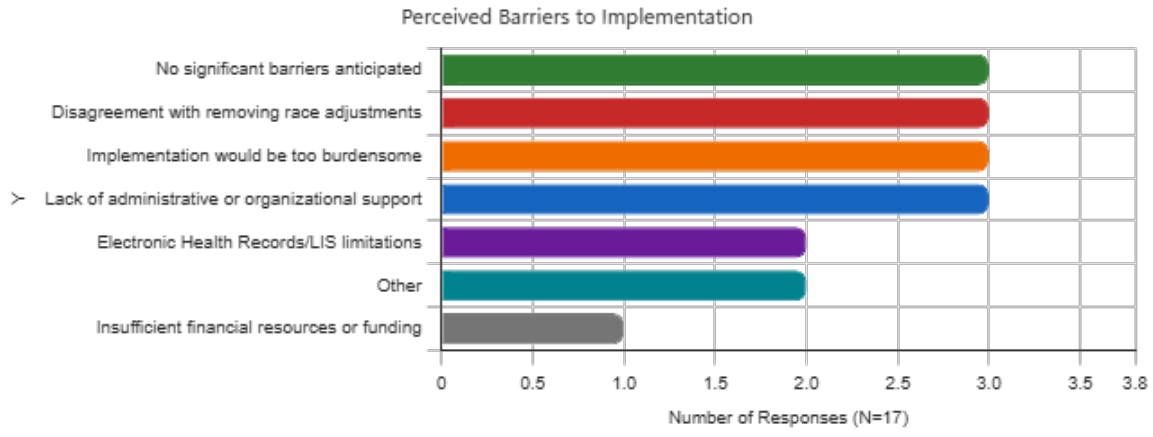
Pennsylvania eliminated the use of race in its prenatal screening serum laboratory testing.

> *"We don't simply want to just remove race without knowing what impact that may have."*
> **— Christina Pierre, PhD, DABCC, FADLM**

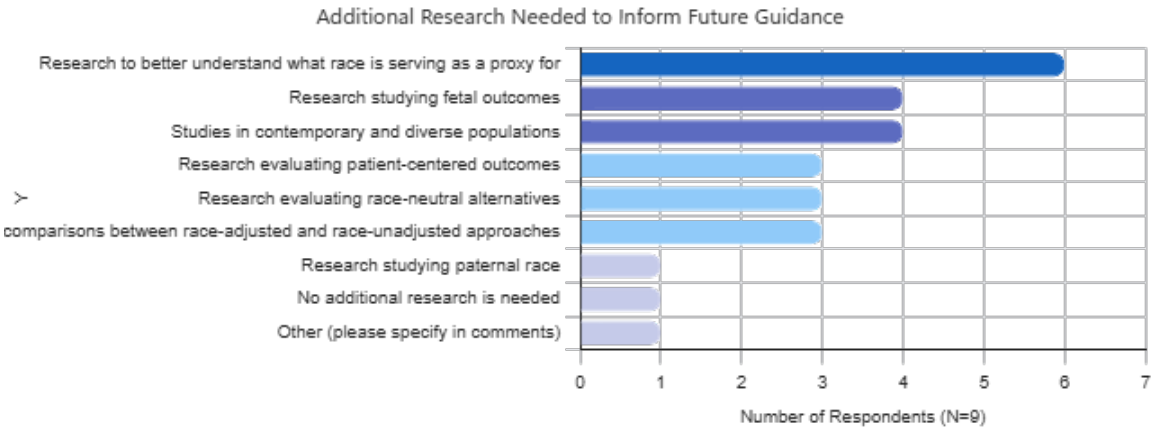
- Speakers emphasized the need for robust validation studies, quality assurance processes, and ongoing outcome monitoring.
- Laboratories were encouraged to critically evaluate existing algorithms and identify opportunities to reduce reliance on race-based variables.
- The importance of collecting high-quality data and understanding what race may be serving as a proxy for was repeatedly highlighted.
    - As part of the CAP's Encoding Equity Grant, the University of Pennsylvania is doing research to:
        - Re-analyze previously published data using more accurate race and ethnicity
        - Evaluate associations between social determinants of health and AFP
        - Evaluate whether genetic ancestry is associated with AFP
- Discussion addressed how laboratories can communicate changes effectively to clinicians and other stakeholders.
- Moving forward will require collaboration among laboratories, clinicians, researchers, vendors, and professional societies.

Results of Polling Questions

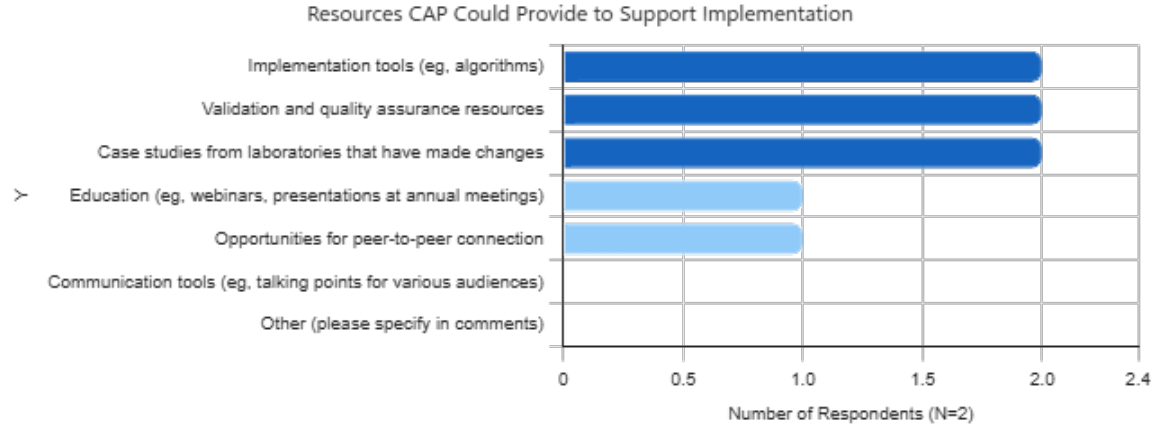
What is the biggest barrier to removing race adjustments?



What data/research is missing?



What resources can the CAP provide to help move this work forward?



Future Educational Opportunities

In a follow-up evaluation survey, participants identified laboratory method validation and the role of placental growth factor (PIGF) in prenatal serum screening as topics for additional educational activities. Participants also expressed interest in future symposia on this evolving topic.

Conclusion

The Prenatal Serum Screening Symposium highlighted both the growing momentum and the remaining uncertainty surrounding the use of race in prenatal serum screening algorithms. While participants generally agreed that race is an imperfect variable and that laboratories should strive toward approaches grounded in biology rather than social constructs, the discussions also revealed that significant evidence gaps remain

regarding patient outcomes, race-neutral alternatives, and the factors for which race may be serving as a proxy. Importantly, the symposium demonstrated that the primary challenge is no longer merely whether race should be reconsidered, but how laboratories can responsibly implement change while maintaining clinical performance, provider confidence, and patient trust. The conversations revealed both enthusiasm for modernization and caution about moving faster than the evidence allows, underscoring the need for continued research, multidisciplinary collaboration, and practical tools to support laboratories navigating this evolving landscape. More broadly, the symposium reinforced the important role of pathology and laboratory medicine in leading national conversations about equity, evidence generation, and the responsible use of clinical algorithms in patient care.

COLLEGE of AMERICAN PATHOLOGISTS

Prenatal Serum Screening Symposium

Speakers' Biographies

April Dione Adams, MD, MS

Baylor College of Medicine

Dr. Adams is an assistant professor at Baylor College of Medicine, where she serves in both the Department of Molecular and Human Genetics and the Department of Maternal-Fetal Medicine. She is board certified in obstetrics and gynecology, maternal-fetal medicine, and medical genetics.

In addition to her academic roles, Dr. Adams is the program director for the maternal-fetal medicine fellowship and the combined maternal-fetal medicine/ medical genetics fellowship programs.

Dr. Adams' primary clinical practice encompasses both maternal and fetal genetics, with a focus on delivering care to underserved populations. Her research endeavors include exploring the effects of social determinants of health in reproductive genetics and identifying the genomic etiologies of stillbirth.

Allison Allen, MD

University of Iowa

Dr. Allen is an associate program director of the Maternal-Fetal Medicine Program and clinical assistant professor of the Department of Obstetrics and Gynecology, Division of Maternal-Fetal Medicine at the University of Iowa. She is board certified in obstetrics and gynecology and medical genetics and genomics.

Dr. Allen is passionate about providing empathetic and comprehensive care to patients who are experiencing pregnancy complications, as well as their families.

Aaron Baugh, MD

University of California San Francisco

Dr. Baugh is a UCSF-trained pulmonary specialist dedicated to advancing the understanding of racial disparities in smoking-related lung disease, and of factors that contribute to optimal lung function. He currently serves as chair of pulmonology at the oldest and largest organization for Black physicians in the United States.

R. Nicholas Burns, MD
UT Southwestern Medical Center

Dr. Burns is a maternal-fetal medicine specialist. He is an assistant professor and assistant residency program director in the Department of Obstetrics and Gynecology at the University of Texas Southwestern Medical Center in Dallas. He completed his residency at Brown University / Women and Infants Hospital of Rhode Island, and his fellowship at the University of Washington in Seattle.

Dr. Brown co-authored a study in *Obstetrics & Gynecology* re-evaluating the use of race as a corrective factor in maternal serum AFP measurements. His other academic interests include medical education and applying emerging technologies to both medical education and obstetric care.

Shani S. Delaney, MD
University of Washington School of Medicine

Dr. Delaney is on staff at the Maternal Fetal Medicine Clinic and the Birth Center at the University of Washington Medical Center (UWMC), and is a professor of obstetrics and gynecology and maternal fetal medicine at UW School of Medicine. She is a *Seattle Met Magazine* Top Doctor and program director of UW's maternal fetal medicine fellowship. She treats high-risk obstetric patients, striving to create active partnerships with them to achieve the best possible outcomes.

Dr. Delaney earned her MD at the University of California, San Francisco. She is board certified in obstetrics and gynecology as well as maternal fetal medicine. Her clinical interests include prenatal diagnosis, genetic abnormalities, fetal therapies, and induction of labor.

Tianhua Huang, PhD
Better Outcomes Registry & Network Ontario

Dr. Huang is an expert in prenatal screening with more than 25 years of experience in improving screening quality and program performance. She is a prenatal screening specialist with Prenatal Screening Ontario and a research associate scientist in the Genetics Program of North York General Hospital in Toronto.

Dr. Huang trained in medicine and received a PhD in preventive medicine from Queen Mary, University of London. Her work has helped shape screening practices in Ontario, including the introduction of Enhanced First Trimester Screening. She has contributed to international and provincial committees, including the CAP/ACMG Biochemical and Molecular Genetics Committee. Her current research focuses on advancing prenatal screening for aneuploidies and preeclampsia.

Danna Hull, MSc, CCGC, CGC
Better Outcomes Registry & Network Ontario

Ms. Hull is a Canadian and American certified genetic counselor with 18 years of clinical, programmatic, and leadership experience in medical genetics and prenatal screening in Canada. She holds a MS in genetic counselling from McGill University and currently works with Prenatal Screening Ontario within BORN Ontario, where she supports province-wide prenatal screening operations, laboratory partnerships, quality assurance initiatives, clinician education, and research. As co-chair of BORN's Health Equity Advisory Group, her work centers on the safe, ethical, and meaningful collection and use of race, sociodemographic, and social determinant of health data to improve maternal and perinatal healthcare and outcomes.

Prior to her role with PSO, Ms. Hull was on staff at Kingston Health Sciences Centre, where she was the inaugural lead genetic counsellor and served as an adjunct professor at Queen's University. Danna served as the 2023 president of the Canadian Association of Genetic Counsellors and remains actively involved in advancing the field through education and mentorship.

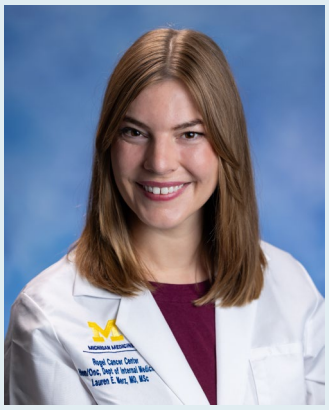
Julie W. Lemmon, MD, FCAP
JWL Pathology Services, PLLC

Dr. Lemmon has been practicing community pathology for almost 20 years. She has served as the laboratory medical director and pathologist onsite at Sumner Regional Medical Center in Gallatin, TN since 2012. Her other duties include leadership roles as vice chief, then chief of medical staff, as well as multiple committees.

Dr. Lemmon earned her bachelor's in biology from the University of South Carolina and her MD from the University of Tennessee Health Sciences Center. She completed a transitional internship at Tripler Army Medical Center in Honolulu, and AP/CP residency at the National Capital Consortium (Walter Reed Army Medical Center and National Naval Medical Center). She started her career as a community pathologist at Eisenhower Army Medical Center in Augusta, GA where she served four years before separating from the Army and taking her current position.

Dr. Lemmon has been involved with the CAP since residency, when she was a Junior Member on the Toxicology Resource Committee. She's a member of the Engaged Leaders Network, served on the Member Engagement Committee, and is currently vice chair of the DEIA Committee. She's been a member of the House of Delegates since 2017 and is the current chair of the Tennessee Delegation.

Having a lifelong interest in the medical humanities, Dr. Lemmon has enjoyed returning to the classroom, earning an ALM with a concentration in museum studies from the Harvard Extension School and an MA in the history of medicine from Johns Hopkins. She is a firm believer that understanding the historical roots of modern health care problems is essential when considering solutions. Pathologists, as physicians and health care leaders, have a uniquely broad perspective that merits a seat at the table where decisions are made about how and where we practice medicine.



Lauren Merz, MD

American Society of Hematology

Dr. Merz earned her MD and a MS in clinical research from the University of Michigan in 2019. She then completed internal medicine training at Brigham and Women's Hospital in Boston before a hematology/oncology fellowship at Dana-Farber Cancer Institute/Mass General Brigham. She was recruited to UM in 2025 as a tenure-track assistant professor of medicine in classical hematology.

Dr. Merz's research interests focus on women's health and the Duffy null variant. Her work has established novel Duffy null-specific reference intervals for adults and pediatrics through international and multicenter domestic collaborations, including with the American Society of Hematology and the Doris Duke Foundation. She was instrumental in the development and acceptance of new ICD-10 codes for the four Duffy phenotypes. She has also assessed the impact of the Duffy variant on clinical trial eligibility as well as the impact of Duffy status on treatment response and outcomes in oncology.

Kisha Mitchell Richards, MD, FCAP

Greenwich Hospital

Dr. Mitchell Richards was born and raised in Montego Bay, Jamaica; earned her medical degree at the University of the West Indies, Mona, Kingston, Jamaica; and completed internships at the Cornwall Regional Hospital and the University Hospital of the West Indies (UHWI). She began her post-graduate life in anatomic pathology at UHWI, then completed a residency in anatomic and clinical pathology at the George Washington University School of Medicine, followed by fellowships in forensic pathology at the University of South Florida and in gastrointestinal pathology at the University of Pittsburgh Medical Center.

Dr. Mitchell Richards is board certified in anatomic and clinical pathology and forensic pathology by the American Board of Pathology. She started her career as a gastrointestinal and liver pathologist at Yale University School of Medicine, subsequently adding the practice of autopsy pathology at Yale, where she also became the director of Autopsy. In January of 2016, she joined the pathology practice at Greenwich Hospital, and has been the director of Pathology and Clinical Laboratory Services there since February 2018.

Dr. Mitchell Richards also chairs the CAP Curriculum Committee, leading them in their mission to develop programs that address the education needs of a spectrum of learners. In addition, as chair of the CAP's DEIA Committee, she leads efforts to foster inclusion and belonging for pathologists and pathologists-in-training. She is chair of the Board of Trustees of the Long Ridge School, as well as chair of the Board's Diversity, Equity, Inclusion, and Belonging Committee and a member of the Board of the American Red Cross Metro NY North Chapter.

Ann M. Moyer, MD, PhD, FCAP

Mayo Clinic

Dr. Moyer is a professor of laboratory medicine and pathology as well as assistant professor of pharmacology at the Mayo Clinic, where she's involved in clinical laboratory testing for pharmacogenomics, renal genetics, and genetic disorders of immune deficiency and dysregulation. After graduating from the University of Wisconsin-Platteville, Dr. Moyer completed the MD/PhD program, pathology residency, and molecular genetic pathology fellowship at Mayo Clinic. She is currently the vice chair leading the Hereditary Practice within the Division of Laboratory Genetics and Genomics, Department of Laboratory Medicine and Pathology, at Mayo Clinic.

Dr. Moyer is a member of the CAP Council on Scientific Affairs and Economic Affairs Committee and previously chaired the Molecular Cluster and the Biochemical and Molecular Genetics Committee. Her research interests mirror her clinical interests, with a special interest in pharmacogenomics and complement system genetics. Dr. Moyer has authored over 100 peer-reviewed manuscripts, as well as several book chapters.

Christina Colette Pierre, PhD, DABCC, FADLM

Perelman School of Medicine at the University of Pennsylvania

Dr. Pierre is an American Board of Clinical Chemistry-certified clinical laboratorian, with over 10 years of laboratory medicine experience. She earned her PhD in molecular biology from McMaster University in 2015 and completed a two-year fellowship in clinical chemistry at the University of Virginia in 2020. Dr. Pierre is an assistant professor in the Department of Pathology and Laboratory Medicine at the University of Pennsylvania's Perelman School of Medicine. She is director of the Douglas B. Cines MD Special Coagulation Laboratory and point of care testing at the Hospital of University of Pennsylvania. Her scholarly work focuses on health equity in laboratory medicine.

Dr. Pierre has held multiple professional roles related to health equity, diversity, equity, and inclusion. She served as the marketing and sponsorship coordinator of the Health Equity Division of the Association for Diagnostics and Laboratory Medicine from 2021 to 2024, and chair of the diversity, equity, and inclusion committee of the Association for Diagnostics and Laboratory Medicine from 2022 to 2024. In 2022 she was the recipient of an Outstanding Contribution Award from the Association for Diagnostics & Laboratory Health Equity and Access Division, and in 2024 she received a Presidential Citation for her work in advancing health equity, and diversity, equity, and inclusion from the Association for Diagnostics & Laboratory Medicine. Dr. Pierre has authored multiple articles on health equity and on the use of race in laboratory medicine.